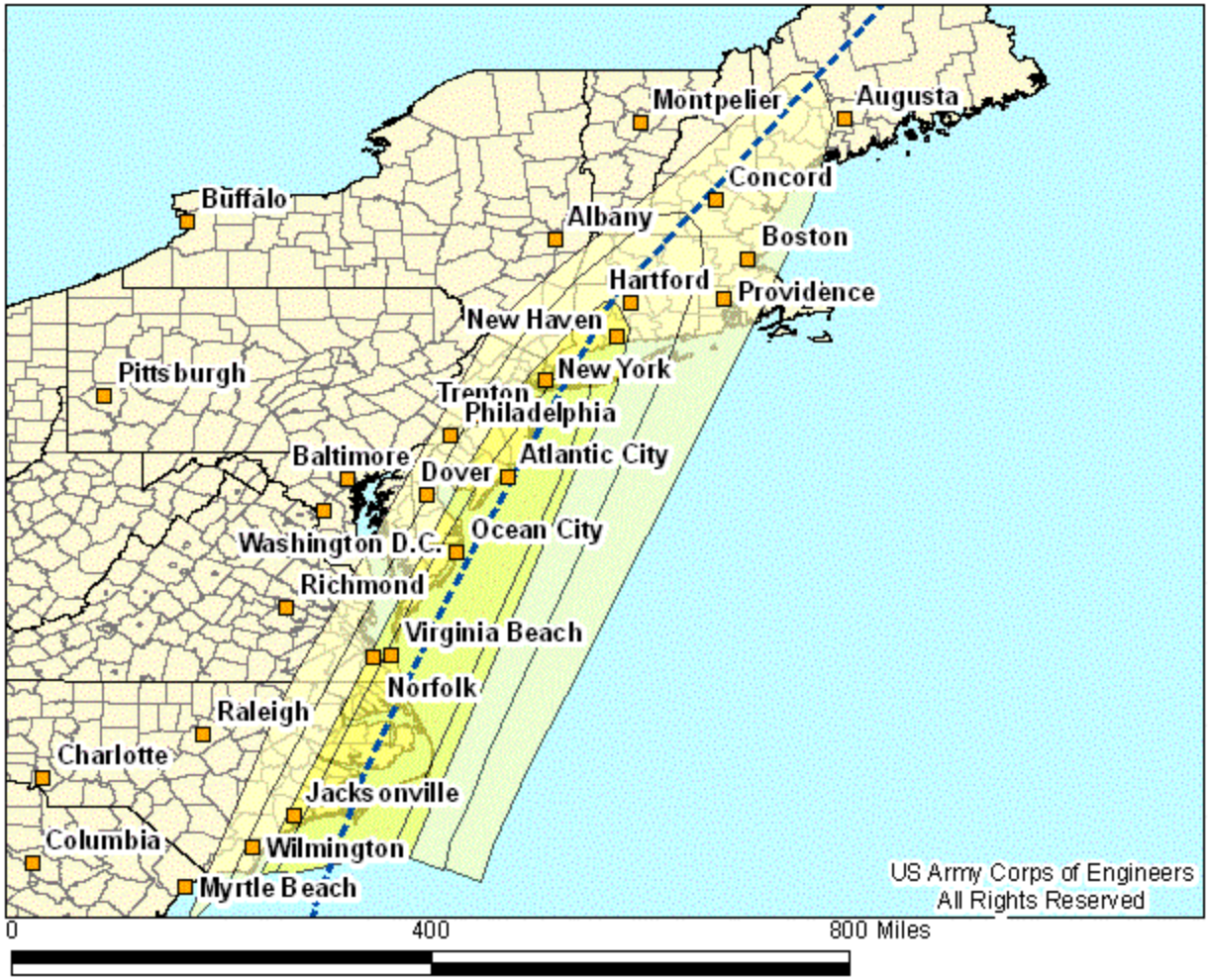
US Army Corps of Engineers

Hurricane Irene Projected Damage Areas

Landfall Expected In About **16** Hours

For Planning Purposes Only!



Post Landfall Projected Damage Areas

This model is based on a Category 1 storm making landfall near Outer Banks, NC.

Forecast Track

Projected Damage Areas

- CAT 0-type damage
- CAT 1-type damage
- CAT 2-type damage
- CAT 3-type damage
- CAT 4-type damage
- CAT 5-type damage

Information provided on this page displays a projected or actual Category 1 storm making landfall near Outer Banks, NC. These projections are based on information from the NHC (1700 EDT 08/26/2011) forecast and extrapolated by LRL staff to represent a landfall condition that has either occurred or may occur in the near future.

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Irene Projected Damage Areas

Generated By:
Ssiemsen, LRL 1730 EDT 08/26/2011

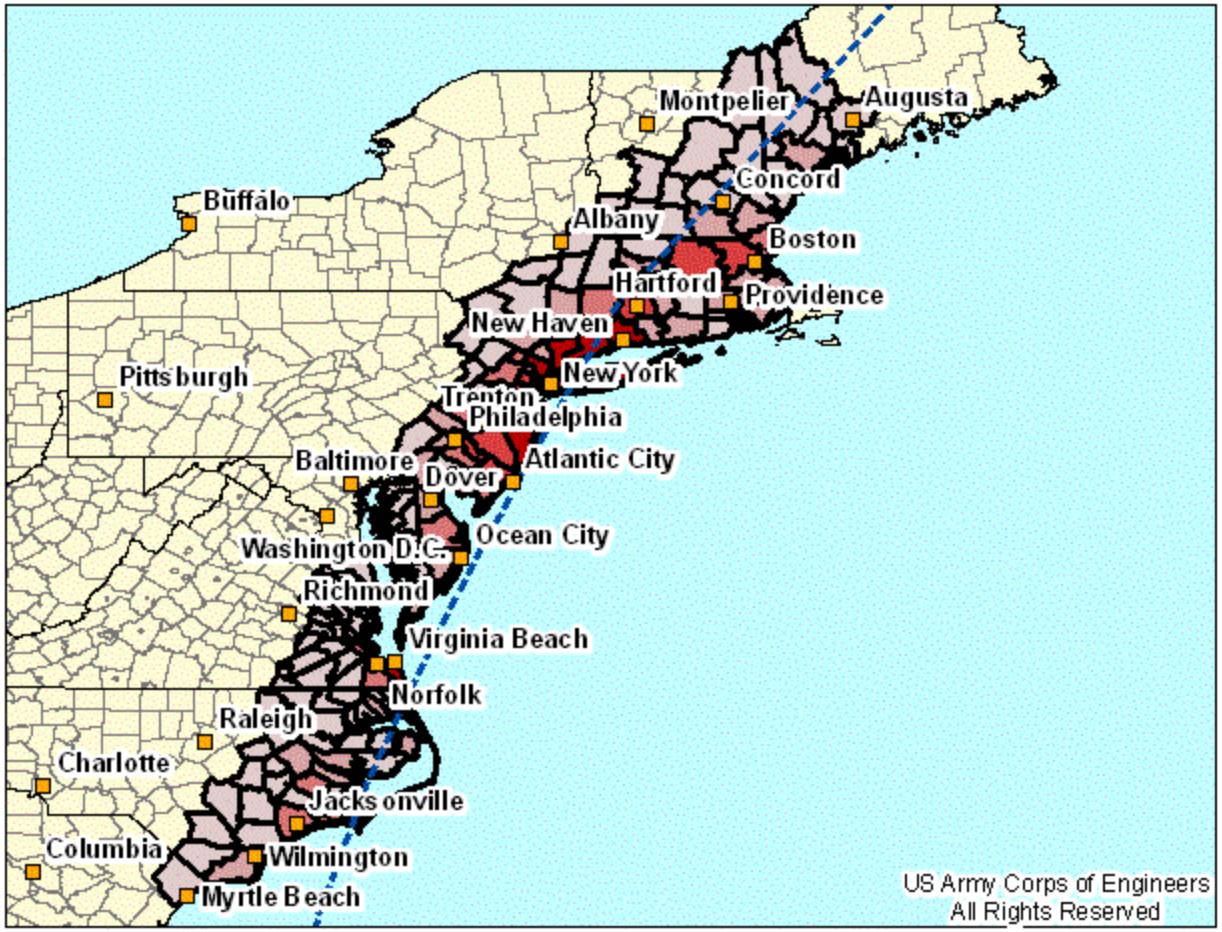
Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Irene Debris Model

Landfall Expected In About **16** Hours

For Planning Purposes Only!



Post Landfall Debris Model Results

New York - 14,996,000 Yards
New Jersey - 12,880,000 Yards
Connecticut - 4,088,000 Yards
Virginia - 3,435,000 Yards
Massachusetts - 2,735,000 Yards
North Carolina - 2,504,000 Yards
Pennsylvania - 1,420,000 Yards
Delaware - 708,000 Yards
New Hampshire - 599,000 Yards
Maryland - 451,000 Yards
Rhode Island - 408,000 Yards
Maine - 294,000 Yards
Vermont - 45,000 Yards
South Carolina - 3,000 Yards

Model results per County on following page

This model is based on a Category 1 storm making landfall near Outer Banks, NC.

Forecast Track

Debris

- < 100,000 cubic yards
- 100,000 - 249,999 cubic yards
- 250,000 - 499,999 cubic yards
- 500,000 - 999,999 cubic yards
- >1,000,000 cubic yards

Information provided on this page displays a Category 1 storm making landfall near Outer Banks, NC. These projections are based on information from the NHC (1700 EDT 08/26/2011) forecast. The amount of debris forecasted is possible total volume, not necessarily the volume that may need to be removed with Federal funds, but does not include volume that may be covered by private insurance. Debris volume may include storm surge generated debris.

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Irene Debris Model

Generated By:
Ssiemsen, LRL 1730 EDT 08/26/2011

Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Irene Debris Model

Landfall Expected In About 16 Hours

For Planning Purposes Only!

State	Yards per State	County	Yards per County
Connecticut		Fairfield County	1,317,000
		Hartford County	746,000
		Litchfield County	257,000
		Middlesex County	172,000
		New Haven County	1,224,000
		New London County	175,000
		Tolland County	116,000
		Windham County	81,000
Connecticut	4,088,000		
Delaware		Kent County	110,000
		New Castle County	148,000
		Sussex County	450,000
Delaware	708,000		
Maine		Androscoggin County	47,000
		Cumberland County	110,000
		Franklin County	12,000
		Kennebec County	7,000
		Oxford County	27,000
		Sagadahoc County	< 1,000
		York County	91,000
Maine	294,000		
Maryland		Caroline County	19,000
		Cecil County	< 1,000
		Dorchester County	24,000
		Kent County	< 1,000
		Queen Anne's County	4,000
		Somerset County	36,000
		St. Mary's County	19,000
		Talbot County	17,000
(continued)		Wicomico County	131,000
		Worcester County	201,000
Maryland	451,000		
Massachusetts		Berkshire County	68,000
		Bristol County	160,000
		Essex County	274,000
		Franklin County	67,000
		Hampden County	357,000
		Hampshire County	116,000
		Middlesex County	546,000
		Norfolk County	247,000
		Plymouth County	133,000
		Suffolk County	221,000
		Worcester County	546,000
Massachusetts	2,735,000		
New Hampshire		Belknap County	33,000
		Carroll County	39,000
		Cheshire County	73,000
		Coos County	3,000
		Grafton County	20,000
		Hillsborough County	163,000
		Merrimack County	74,000
		Rockingham County	124,000
		Strafford County	51,000
		Sullivan County	19,000
New Hampshire	599,000		

The amount of debris forecasted is possible total volume, not necessarily the volume that may need to be removed with Federal funds, but does not include volume that may be covered by private insurance. Debris volume may include storm surge generated debris.

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Source: US Army Corps of Engineers, All Rights Reserved

Hurricane Irene Debris Model

Generated By:
Ssiemsen, LRL 1730 EDT 08/26/2011

Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Irene Debris Model

Landfall Expected In About 16 Hours

For Planning Purposes Only!

State	Yards per State	County	Yards per County
New Jersey		Atlantic County	810,000
		Bergen County	1,226,000
		Burlington County	564,000
		Camden County	531,000
		Cape May County	331,000
		Cumberland County	203,000
		Essex County	712,000
		Gloucester County	262,000
		Hudson County	882,000
		Hunterdon County	68,000
		Mercer County	369,000
		Middlesex County	1,152,000
		Monmouth County	1,706,000
		Morris County	417,000
		Ocean County	2,070,000
		Passaic County	432,000
		Salem County	44,000
		Somerset County	331,000
		Sussex County	72,000
		Union County	670,000
		Warren County	28,000
New Jersey	12,880,000		
New York		Bronx County	971,000
		Columbia County	19,000
		Dutchess County	173,000
		Greene County	< 1,000
		Kings County	2,355,000
		Nassau County	2,890,000
		New York County	1,103,000
		Orange County	181,000

State	Yards per State	County	Yards per County
New York		Putnam County	78,000
(continued)		Queens County	2,868,000
		Rensselaer County	< 1,000
		Richmond County	683,000
		Rockland County	203,000
		Suffolk County	2,311,000
		Sullivan County	5,000
		Ulster County	68,000
		Westchester County	1,088,000
New York	14,996,000		
North Carolina		Beaufort County	130,000
		Bertie County	36,000
		Bladen County	2,000
		Brunswick County	119,000
		Camden County	36,000
		Carteret County	262,000
		Chowan County	38,000
		Columbus County	5,000
		Craven County	288,000
		Currituck County	84,000
		Dare County	132,000
		Duplin County	35,000
		Edgecombe County	17,000
		Gates County	19,000
		Greene County	10,000
		Halifax County	6,000
		Hertford County	24,000
		Hyde County	37,000

The amount of debris forecasted is possible total volume, not necessarily the volume that may need to be removed with Federal funds, but does not include volume that may be covered by private insurance. Debris volume may include storm surge generated debris.

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Source: US Army Corps of Engineers, All Rights Reserved

Hurricane Irene Debris Model

Generated By:
Ssiemsen, LRL 1730 EDT 08/26/2011

Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Irene Debris Model

Landfall Expected In About 16 Hours

For Planning Purposes Only!

State	Yards per State	County	Yards per County
North Carolina		Jones County	28,000
(continued)		Lenoir County	42,000
		Martin County	29,000
		New Hanover County	249,000
		Northampton County	9,000
		Onslow County	323,000
		Pamlico County	56,000
		Pasquotank County	133,000
		Pender County	70,000
		Perquimans County	43,000
		Pitt County	144,000
		Sampson County	2,000
		Tyrrell County	25,000
		Washington County	46,000
		Wayne County	22,000
		Wilson County	3,000
North Carolina	2,504,000		
Pennsylvania		Bucks County	338,000
		Chester County	8,000
		Delaware County	214,000
		Montgomery County	221,000
		Philadelphia County	639,000
		Pike County	< 1,000
Pennsylvania	1,420,000		
Rhode Island		Bristol County	23,000
		Kent County	71,000
		Newport County	36,000
		Providence County	224,000
		Washington County	54,000

State	Yards per State	County	Yards per County
Rhode Island	408,000		
(continued)			
South Carolina		Horry County	3,000
South Carolina	3,000		
Vermont		Bennington County	< 1,000
		Windham County	41,000
		Windsor County	4,000
Vermont	45,000		
Virginia		Accomack County	123,000
		Charles City County	< 1,000
		Chesapeake city	447,000
		Essex County	< 1,000
		Franklin city	6,000
		Gloucester County	33,000
		Greensville County	< 1,000
		Hampton city	152,000
		Isle of Wight County	39,000
		James City County	49,000
		King William County	2,000
		King and Queen County	2,000
		Lancaster County	10,000
		Mathews County	12,000
		Middlesex County	10,000
		New Kent County	2,000
		Newport News city	279,000
		Norfolk city	499,000
		Northampton County	33,000

The amount of debris forecasted is possible total volume, not necessarily the volume that may need to be removed with Federal funds, but does not include volume that may be covered by private insurance. Debris volume may include storm surge generated debris.

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Hurricane Irene Debris Model

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Ssiemsen, LRL 1730 EDT 08/26/2011

Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Irene Debris Model

Landfall Expected In About 16 Hours

For Planning Purposes Only!

State	Yards per State	County	Yards per County
Virginia		Northumberland County	9,000
(continued)		Poquoson city	13,000
		Portsmouth city	226,000
		Prince George County	< 1,000
		Richmond County	2,000
		Southampton County	12,000
		Suffolk city	93,000
		Surry County	7,000
		Sussex County	4,000
		Virginia Beach city	1,304,000
		Westmoreland County	< 1,000
		Williamsburg city	7,000
		York County	60,000
Virginia	3,435,000		

The amount of debris forecasted is possible total volume, not necessarily the volume that may need to be removed with Federal funds, but does not include volume that may be covered by private insurance. Debris volume may include storm surge generated debris.

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Source: US Army Corps of Engineers, All Rights Reserved

Hurricane Irene Debris Model

Generated By:
Ssiemsen, LRL 1730 EDT 08/26/2011

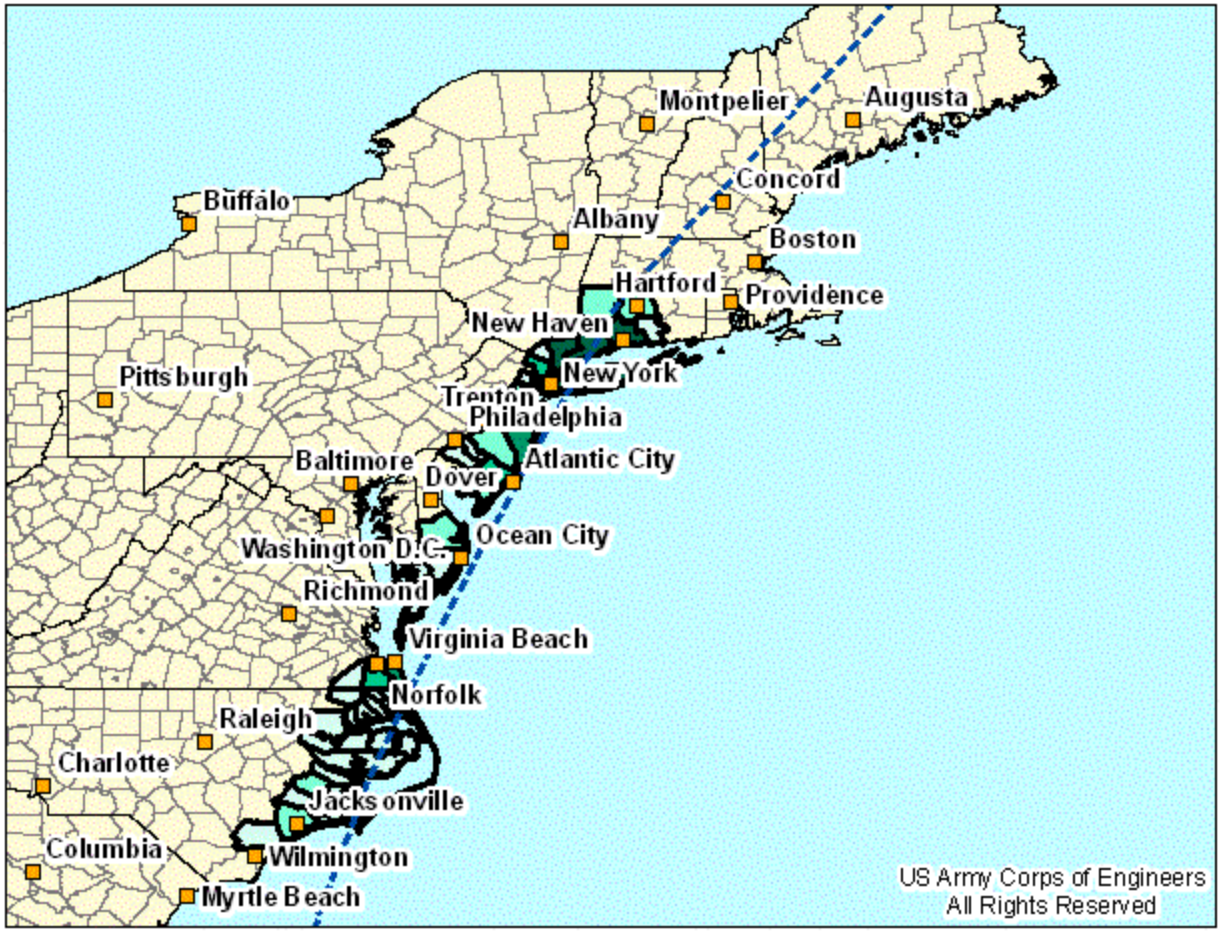
Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Irene Commodities Model

Landfall Expected In About **16** Hours

For Planning Purposes Only!



Post Landfall Water Model Results

Day One / Day Two / Day Three

New York – 175/350/697 Truckloads
New Jersey – 50/100/193 Truckloads
Connecticut – 28/56/112 Truckloads
Virginia – 16/32/63 Truckloads
North Carolina – 10/20/39 Truckloads
Delaware – 2/4/7 Truckloads
Maryland – 2/3/6 Truckloads

Model results per County on following page

This model is based on a Category 1 storm making landfall near Outer Banks, NC.

Forecast Track

Commodities

- < 5 Trucks Each
- 5 - 10 Trucks Each
- 11 - 20 Trucks Each
- 21 - 40 Trucks Each
- > 40 Trucks Each

Information provided on this page displays a Category 1 storm making landfall near Outer Banks, NC. These projections are based on information from the NHC ***(1700 EDT 08/26/2011)*** forecast. The amount of commodities forecasted is based on Mission Guide Book requirements and SME input. The graphic represents daily needs with a ramp-up in the distribution system – three days for Points of Distribution (PODs) to be fully in place and operational. Volume shown is for each commodity – water and ice. Commodity need may be supplied by multiple agencies and/or sources.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Irene Commodities Model	
Generated By: Ssiemsen, LRL 1730 EDT 08/26/2011	
Sources: HURREVAC LRL-DEBRIS	Page 7 of 27

US Army Corps of Engineers

Hurricane Irene Commodities Model

Landfall Expected In About 16 Hours

For Planning Purposes Only!

State	Truckloads per State	County	Truckloads per County
Connecticut		Fairfield County	53
		Hartford County	7
		Litchfield County	5
		Middlesex County	1
		New Haven County	46
Connecticut	112		
Delaware		Sussex County	7
Delaware	7		
Maryland		Somerset County	1
		Wicomico County	2
		Worcester County	3
Maryland	6		
New Jersey		Atlantic County	16
		Bergen County	17
		Burlington County	5
		Camden County	1
		Cape May County	6
		Cumberland County	3
		Essex County	4
		Gloucester County	1
		Hudson County	35
		Mercer County	1
		Middlesex County	22
		Monmouth County	38
		Ocean County	34
		Union County	10
New Jersey	193		

State	Truckloads per State	County	Truckloads per County
New York		Bronx County	82
		Kings County	149
		Nassau County	80
		New York County	95
		Putnam County	1
		Queens County	138
		Richmond County	29
		Rockland County	1
		Suffolk County	77
		Westchester County	45
New York	697		
North Carolina		Beaufort County	2
		Bertie County	1
		Camden County	1
		Carteret County	4
		Chowan County	1
		Craven County	6
		Currituck County	2
		Dare County	3
		Gates County	1
		Hyde County	1
		Jones County	1
		Martin County	1
		Onslow County	7
		Pamlico County	1
		Pasquotank County	3
		Pender County	1
		Perquimans County	1

Source: US Army Corps of Engineers, All Rights Reserved

The amount of commodities forecasted is based on Mission Guide Book requirements and SME input and the above table indicates suggested daily needs based on full deployment of a commodities distribution system. Volume shown is for each commodity – water and ice. Commodity need may be supplied by multiple agencies and/or sources.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Irene Commodities Model

Generated By:
Ssiemsen, LRL 1730 EDT 08/26/2011

Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Irene Commodities Model

Landfall Expected In About **16** Hours

For Planning Purposes Only!

State	Truckloads per State	County	Truckloads per County
North Carolina		Tyrrell County	1
(continued)		Washington County	1
North Carolina	39		
Virginia		Accomack County	3
		Chesapeake city	12
		Norfolk city	15
		Northampton County	1
		Portsmouth city	5
		Suffolk city	1
		Virginia Beach city	26
Virginia	63		

Source: US Army Corps of Engineers, All Rights Reserved

The amount of commodities forecasted is based on Mission Guide Book requirements and SME input and the above table indicates suggested daily needs based on full deployment of a commodities distribution system. Volume shown is for each commodity – water and ice. Commodity need may be supplied by multiple agencies and/or sources.

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or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Irene Commodities Model

Generated By:
Ssiemsen, LRL 1730 EDT 08/26/2011

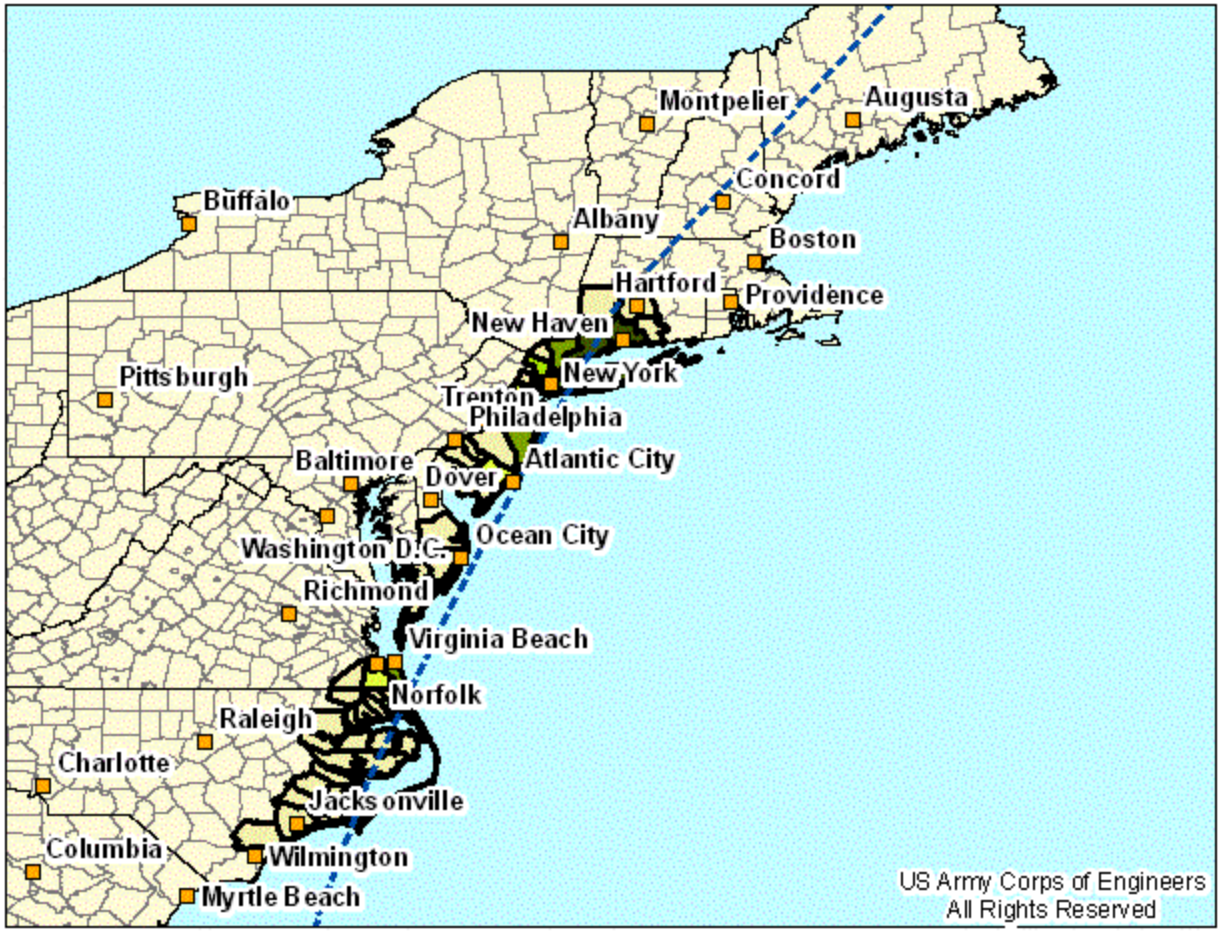
Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Irene Temporary Roofing Model

Landfall Expected In About **16** Hours

For Planning Purposes Only!



Post Landfall Temporary Roofing Model Results

New York - 95,500
New Jersey - 42,600
Connecticut - 25,600
Virginia - 14,500
North Carolina - 7,900
Maryland - 1,800
Delaware - 1,600

Model results per County on following page

This model is based on a Category 1 storm making landfall near Outer Banks, NC.

Forecast Track

Temporary Roofing

- < 2,000 units
- 2,000 - 3,999 units
- 4,000 - 5,999 units
- 6,000 - 9,999 units
- > 10,000 units

Information provided on this page displays a Category 1 storm making landfall near Outer Banks, NC. These projections are based on information from the NHC (1700 EDT 08/26/2011) forecast. Temporary roofing is based on 5% in CAT 1.

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Irene Roofing Model	
Generated By: Ssiemsen, LRL 1730 EDT 08/26/2011	
Sources: HURREVAC LRL-DEBRIS	

US Army Corps of Engineers

Hurricane Irene Temporary Roofing Model

Landfall Expected In About **16** Hours

For Planning Purposes Only!

State	House Units per State	County	House Units per County
Connecticut		Fairfield County	12,000
		Hartford County	1,600
		Litchfield County	1,400
		Middlesex County	< 100
		New Haven County	10,600
Connecticut	25,600		
Delaware		Sussex County	1,600
Delaware	1,600		
Maryland		Somerset County	200
		Wicomico County	500
		Worcester County	1,100
Maryland	1,800		
New Jersey		Atlantic County	3,800
		Bergen County	4,100
		Burlington County	1,100
		Camden County	200
		Cape May County	1,600
		Cumberland County	600
		Essex County	600
		Gloucester County	< 100
		Hudson County	4,300
		Mercer County	200
		Middlesex County	4,900
		Monmouth County	9,100
		Ocean County	10,000
		Union County	2,100
New Jersey	42,600		

State	House Units per State	County	House Units per County
New York		Bronx County	4,600
		Kings County	15,000
		Nassau County	19,900
		New York County	800
		Putnam County	< 100
		Queens County	20,900
		Richmond County	7,200
		Rockland County	< 100
		Suffolk County	18,800
		Westchester County	8,300
New York	95,500		
North Carolina		Beaufort County	500
		Bertie County	< 100
		Camden County	200
		Carteret County	1,400
		Chowan County	300
		Craven County	1,300
		Currituck County	500
		Dare County	800
		Gates County	< 100
		Hyde County	< 100
		Jones County	< 100
		Martin County	< 100
		Onslow County	1,200
		Pamlico County	300
		Pasquotank County	800
		Pender County	< 100
		Perquimans County	300

Temporary roofing is based on 5% in CAT 1.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Source: US Army Corps of Engineers, All Rights Reserved

Hurricane Irene Roofing Model

Generated By:
Ssiemsen, LRL 1730 EDT 08/26/2011

Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Irene Temporary Roofing Model

Landfall Expected In About **16** Hours

For Planning Purposes Only!

State	House Units per State	County	House Units per County
North Carolina		Tyrrell County	< 100
(continued)		Washington County	300
North Carolina	7,900		
Virginia		Accomack County	800
		Chesapeake city	2,800
		Norfolk city	3,000
		Northampton County	300
		Portsmouth city	1,200
		Suffolk city	< 100
		Virginia Beach city	6,400
Virginia	14,500		

Temporary roofing is based on 5% in CAT 1.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Source: US Army Corps of Engineers, All Rights Reserved

Hurricane Irene Roofing Model

Generated By:
Ssiemsen, LRL 1730 EDT 08/26/2011

Sources:
HURREVAC
LRL-DEBRIS

Hurricane Irene Temporary Housing Model

US Army Corps of Engineers

Landfall Expected In About **16** Hours

For Planning Purposes Only!

Post Landfall Temporary Housing Model Results

Minimal Temporary Housing need expected

Model results per County on following page

This model is based on a Category 1 storm making landfall near Outer Banks, NC.

Forecast Track

Temporary Housing

- < 2,000 units
- 2,000 - 3,999 units
- 4,000 - 5,999 units
- 6,000 - 9,999 units
- > 10,000 units

Information provided on this page displays a Category 1 storm making landfall near Outer Banks, NC. These projections are based on information from the NHC (1700 EDT 08/26/2011) forecast. Temporary housing is based on nothing. The number indicated represents a possible need but not necessarily the scope of mission for USACE.

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Irene Housing Model	
Generated By: Ssiemsen, LRL 1730 EDT 08/26/2011	
Sources: HURREVAC LRL-DEBRIS	Page 13 of 27

US Army Corps of Engineers

Hurricane Irene Temporary Housing Model

Landfall Expected In About **16** Hours

For Planning Purposes Only!

State	House Units per State	County	House Units per County

Temporary housing is based on nothing.
The number indicated represents a possible need but not necessarily the scope of mission for USACE.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Source: US Army Corps of Engineers, All Rights Reserved

Hurricane Irene Housing Model

Generated By:
Ssiemsen, LRL 1730 EDT 08/26/2011

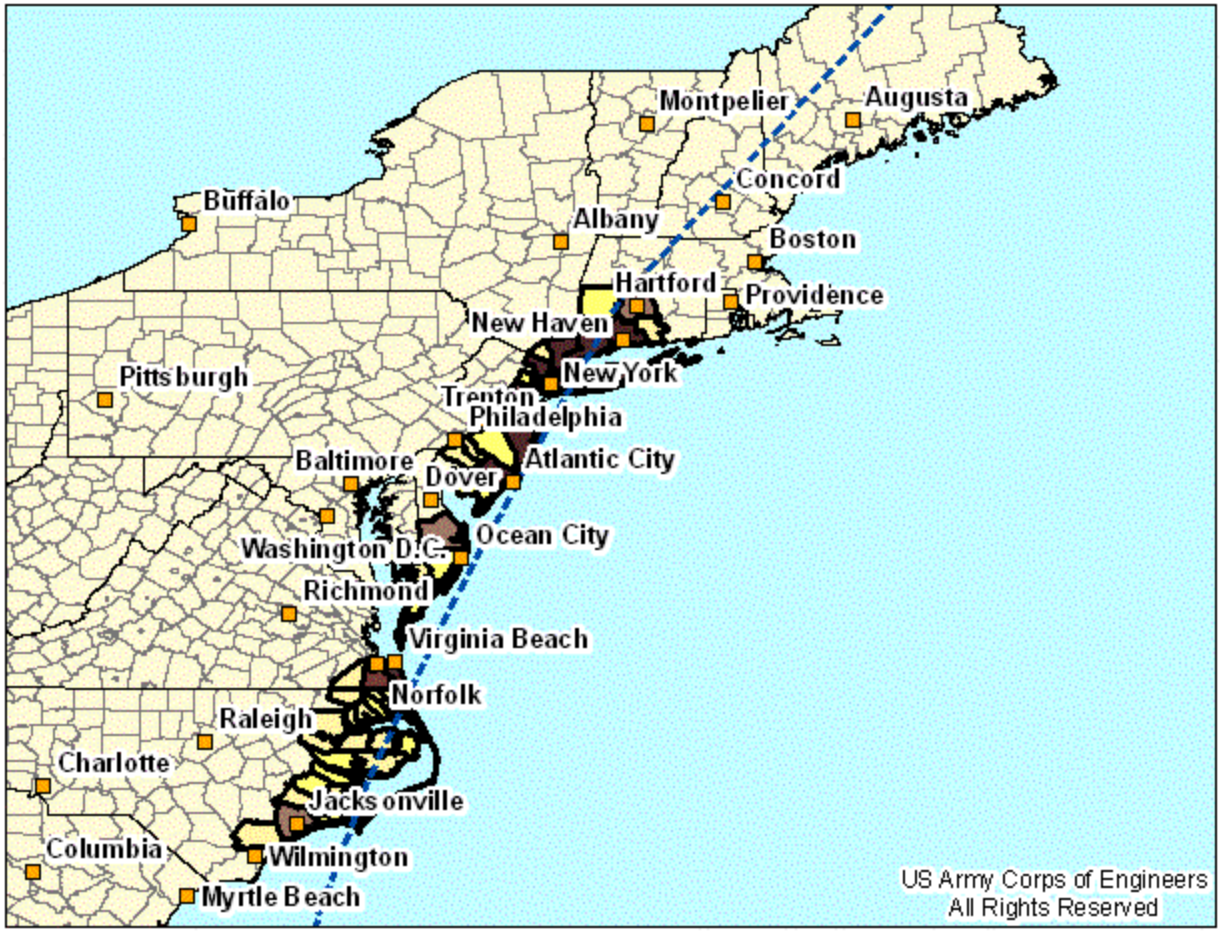
Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Irene Population Model

Landfall Expected In About **16** Hours

For Planning Purposes Only!



Post Landfall Population Model Results

New York - 11,842,000
New Jersey - 3,213,000
Connecticut - 1,869,000
Virginia - 1,000,000
North Carolina - 495,000
Delaware - 112,000
Maryland - 88,000

Model results per County on following page

This model is based on a Category 1 storm making landfall near Outer Banks, NC.

Forecast Track

Population

- < 25,000 persons
- 25,000 - 99,999 persons
- 100,000 - 174,999 persons
- 175,000 - 249,999 persons
- > 250,000 persons

Information provided on this page displays a Category 1 storm making landfall near Outer Banks, NC. These projections are based on information from the NHC (1700 EDT 08/26/2011) forecast. The numbers of persons included in this model output are those that would be included within estimated hurricane force winds (Census 2000 values adjusted to July 2010 values).

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Hurricane Irene Population Model

Generated By:
Ssiemsen, LRL 1730 EDT 08/26/2011

Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Irene Population Model

Landfall Expected In About **16** Hours

For Planning Purposes Only!

State	Population per State	County	Population per County
Connecticut		Fairfield County	893,000
		Hartford County	115,000
		Litchfield County	81,000
		Middlesex County	< 1,000
		New Haven County	780,000
Connecticut	1,869,000		
Delaware		Sussex County	112,000
Delaware	112,000		
Maryland		Somerset County	10,000
		Wicomico County	29,000
		Worcester County	49,000
Maryland	88,000		
New Jersey		Atlantic County	274,000
		Bergen County	287,000
		Burlington County	77,000
		Camden County	9,000
		Cape May County	97,000
		Cumberland County	46,000
		Essex County	58,000
		Gloucester County	3,000
		Hudson County	585,000
		Mercer County	12,000
		Middlesex County	373,000
		Monmouth County	644,000
		Ocean County	578,000
		Union County	170,000
New Jersey	3,213,000		

State	Population per State	County	Population per County
New York		Bronx County	1,392,000
		Kings County	2,547,000
		Nassau County	1,367,000
		New York County	1,615,000
		Putnam County	2,000
		Queens County	2,355,000
		Richmond County	494,000
		Rockland County	3,000
		Suffolk County	1,307,000
		Westchester County	760,000
New York	11,842,000		
North Carolina		Beaufort County	30,000
		Bertie County	3,000
		Camden County	10,000
		Carteret County	66,000
		Chowan County	15,000
		Craven County	90,000
		Currituck County	25,000
		Dare County	35,000
		Gates County	2,000
		Hyde County	6,000
		Jones County	5,000
		Martin County	2,000
		Onslow County	117,000
		Pamlico County	13,000
		Pasquotank County	42,000
		Pender County	3,000
		Perquimans County	13,000

The number of persons estimated to be within the hurricane force winds comes from Census 2000 values adjusted to July 2010 values.

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Source: US Army Corps of Engineers, All Rights Reserved

Hurricane Irene Population Model

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Sources:
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LRL-DEBRIS

US Army Corps of Engineers

Hurricane Irene Population Model

Landfall Expected In About **16** Hours

For Planning Purposes Only!

State	Population per State	County	Population per County
North Carolina		Tyrrell County	5,000
(continued)		Washington County	13,000
North Carolina	495,000		
Virginia		Accomack County	38,000
		Chesapeake city	190,000
		Norfolk city	246,000
		Northampton County	14,000
		Portsmouth city	76,000
		Suffolk city	< 1,000
		Virginia Beach city	436,000
Virginia	1,000,000		

The number of persons estimated to be within the hurricane force winds comes from Census 2000 values adjusted to July 2010 values.

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Source: US Army Corps of Engineers, All Rights Reserved

Hurricane Irene Population Model

Generated By:
Ssiemsen, LRL 1730 EDT 08/26/2011

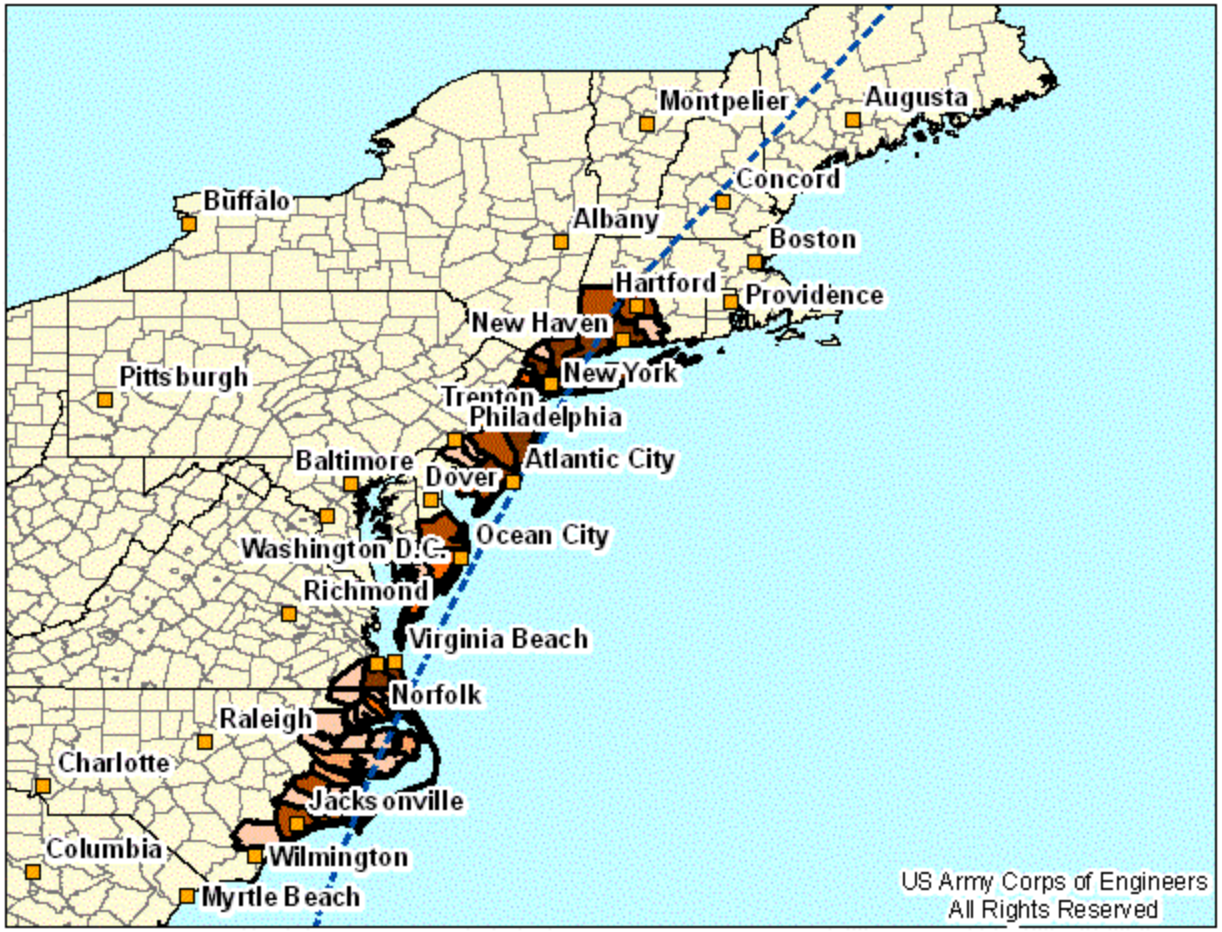
Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Irene Households Model

Landfall Expected In About **16** Hours

For Planning Purposes Only!



Post Landfall Households Model Results

New York - 4,337,000
New Jersey - 1,202,000
Connecticut - 711,000
Virginia - 370,000
North Carolina - 188,000
Delaware - 47,000
Maryland - 36,000

Model results per County on following page

This model is based on a Category 1 storm making landfall near Outer Banks, NC.

Forecast Track

Households

- < 7,500 households
- 7,500 - 14,999 households
- 15,000 - 24,999 households
- 25,000 - 49,999 households
- > 50000 households

Information provided on this page displays a Category 1 storm making landfall near Outer Banks, NC. These projections are based on information from the NHC (1700 EDT 08/26/2011) forecast. The numbers of households included in this model output are those that would be included within estimated hurricane force winds (Census 2000 values adjusted to July 2010 values).

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Hurricane Irene Households Model	
Generated By: Ssiemsen, LRL 1730 EDT 08/26/2011	
Sources: HURREVAC LRL-DEBRIS	Page 18 of 27

US Army Corps of Engineers

Hurricane Irene Households Model

Landfall Expected In About **16** Hours

For Planning Purposes Only!

State	Households per State	County	Households per County
Connecticut		Fairfield County	329,000
		Hartford County	47,000
		Litchfield County	32,000
		Middlesex County	< 1,000
		New Haven County	303,000
Connecticut	711,000		
Delaware		Sussex County	47,000
Delaware	47,000		
Maryland		Somerset County	3,000
		Wicomico County	12,000
		Worcester County	21,000
Maryland	36,000		
New Jersey		Atlantic County	103,000
		Bergen County	111,000
		Burlington County	26,000
		Camden County	3,000
		Cape May County	40,000
		Cumberland County	16,000
		Essex County	20,000
		Gloucester County	< 1,000
		Hudson County	222,000
		Mercer County	5,000
		Middlesex County	135,000
		Monmouth County	235,000
		Ocean County	227,000
		Union County	59,000
New Jersey	1,202,000		

State	Households per State	County	Households per County
New York		Bronx County	485,000
		Kings County	912,000
		Nassau County	459,000
		New York County	776,000
		Putnam County	< 1,000
		Queens County	827,000
		Richmond County	174,000
		Rockland County	< 1,000
		Suffolk County	424,000
		Westchester County	280,000
New York	4,337,000		
North Carolina		Beaufort County	13,000
		Bertie County	2,000
		Camden County	4,000
		Carteret County	28,000
		Chowan County	6,000
		Craven County	35,000
		Currituck County	10,000
		Dare County	15,000
		Gates County	< 1,000
		Hyde County	2,000
		Jones County	2,000
		Martin County	< 1,000
		Onslow County	35,000
		Pamlico County	5,000
		Pasquotank County	16,000
		Pender County	2,000
		Perquimans County	6,000

The number of households estimated to be within the hurricane force winds comes from Census 2000 values adjusted to July 2010 values.

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Source: US Army Corps of Engineers, All Rights Reserved

Hurricane Irene Households Model

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Ssiemsen, LRL 1730 EDT 08/26/2011

Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Irene Households Model

Landfall Expected In About **16** Hours

For Planning Purposes Only!

State	Households per State	County	Households per County
North Carolina		Tyrrell County	2,000
(continued)		Washington County	5,000
North Carolina	188,000		
Virginia		Accomack County	16,000
		Chesapeake city	67,000
		Norfolk city	93,000
		Northampton County	6,000
		Portsmouth city	29,000
		Suffolk city	< 1,000
		Virginia Beach city	159,000
Virginia	370,000		

The number of households estimated to be within the hurricane force winds comes from Census 2000 values adjusted to July 2010 values.

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Source: US Army Corps of Engineers, All Rights Reserved

Hurricane Irene Households Model

Generated By:
Ssiemsen, LRL 1730 EDT 08/26/2011

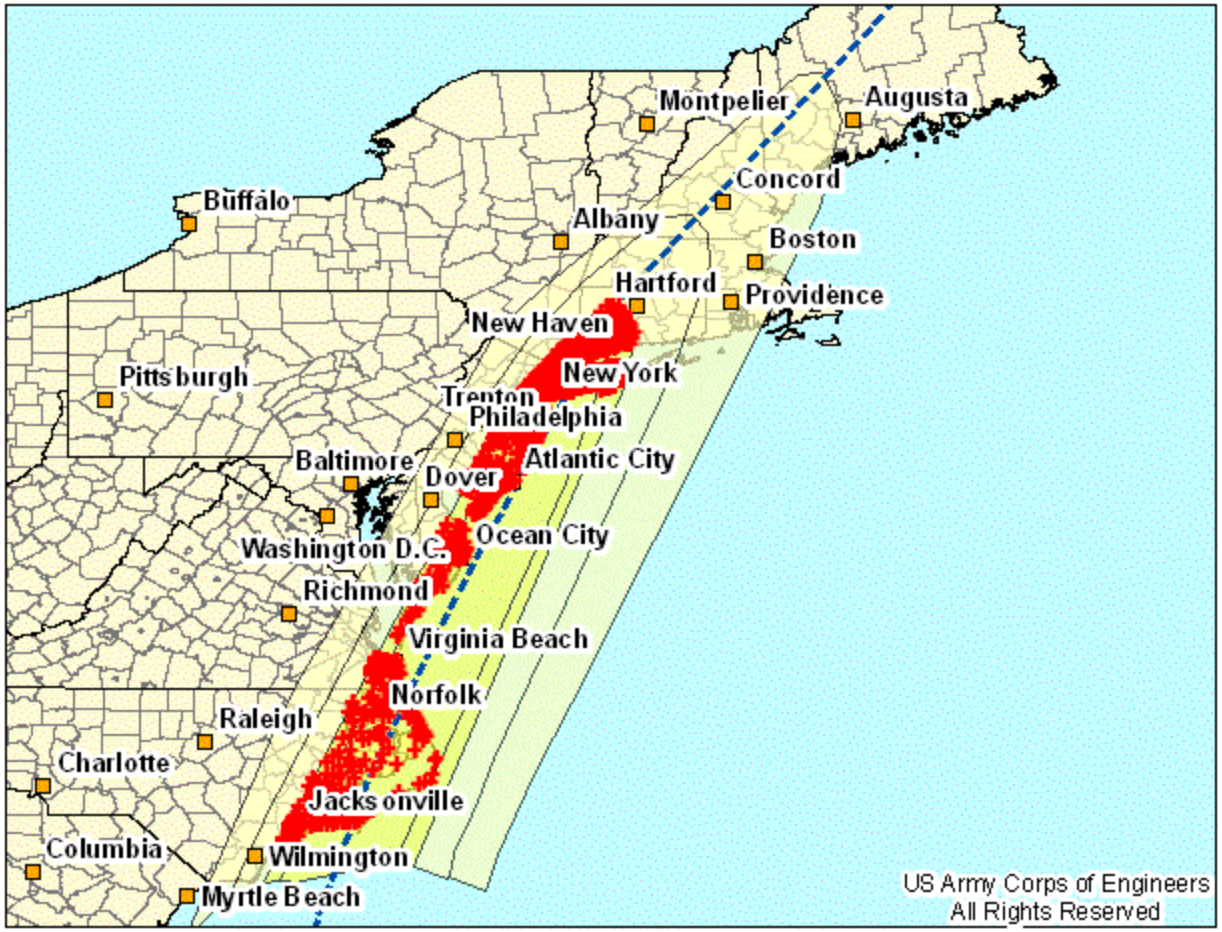
Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Irene Fire Stations

Landfall Expected In About **16** Hours

For Planning Purposes Only!



Most Probable Landfall Fire Stations Inside Hurricane Force Winds

New York - 662
New Jersey - 488
Connecticut - 240
North Carolina - 192
Virginia - 80
Maryland - 24
Delaware - 21

Model results per County on following page

This model is based on a Category 1 storm making landfall near Outer Banks, NC.

+ Fire Stations
Forecast Track

Information provided on this page displays a Category 1 storm making landfall near Outer Banks, NC. These projections are based on information from the NHC (1700 EDT 08/26/2011) forecast.
The number of fire stations included in this output are those that would be included within estimated hurricane force winds (data source: HSIP Gold 2011).

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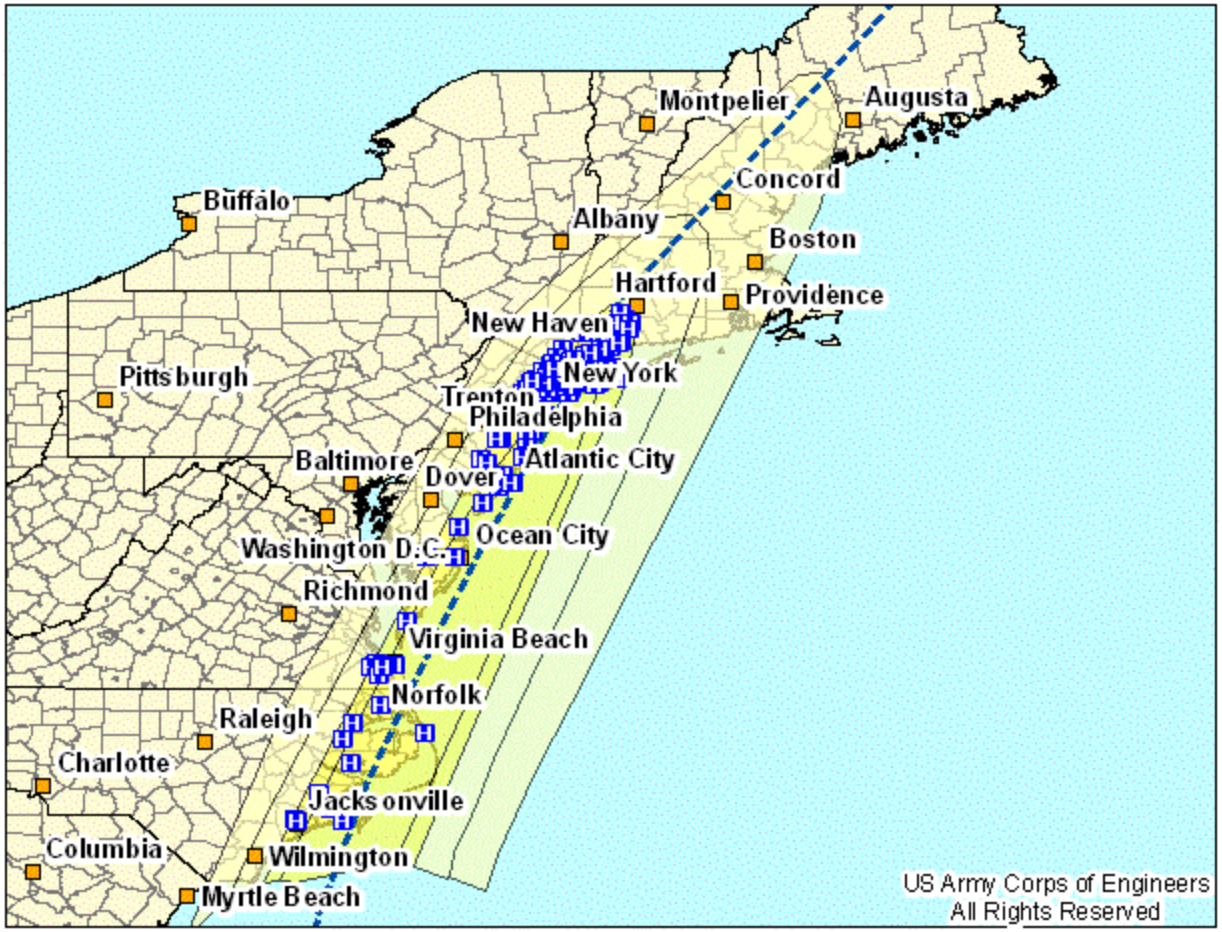
Hurricane Irene Fire Stations	
Generated By: Ssiemsen, LRL 1730 EDT 08/26/2011	
Sources: HURREVAC LRL-DEBRIS	Page 21 of 27

US Army Corps of Engineers

Hurricane Irene Hospitals

Landfall Expected In About 16 Hours

For Planning Purposes Only!



Most Probable Landfall Hospitals Inside Hurricane Force Winds

New York - 99
New Jersey - 47
Connecticut - 21
Virginia - 13
North Carolina - 11
Maryland - 2
Delaware - 1

Model results per County on following page

This model is based on a Category 1 storm making landfall near Outer Banks, NC.

H Hospitals
Forecast Track

Information provided on this page displays a Category 1 storm making landfall near Outer Banks, NC. These projections are based on information from the NHC (1700 EDT 08/26/2011) forecast.
The number of hospitals included in this output are those that would be included within estimated hurricane force winds (data source: HSIP Gold 2011).

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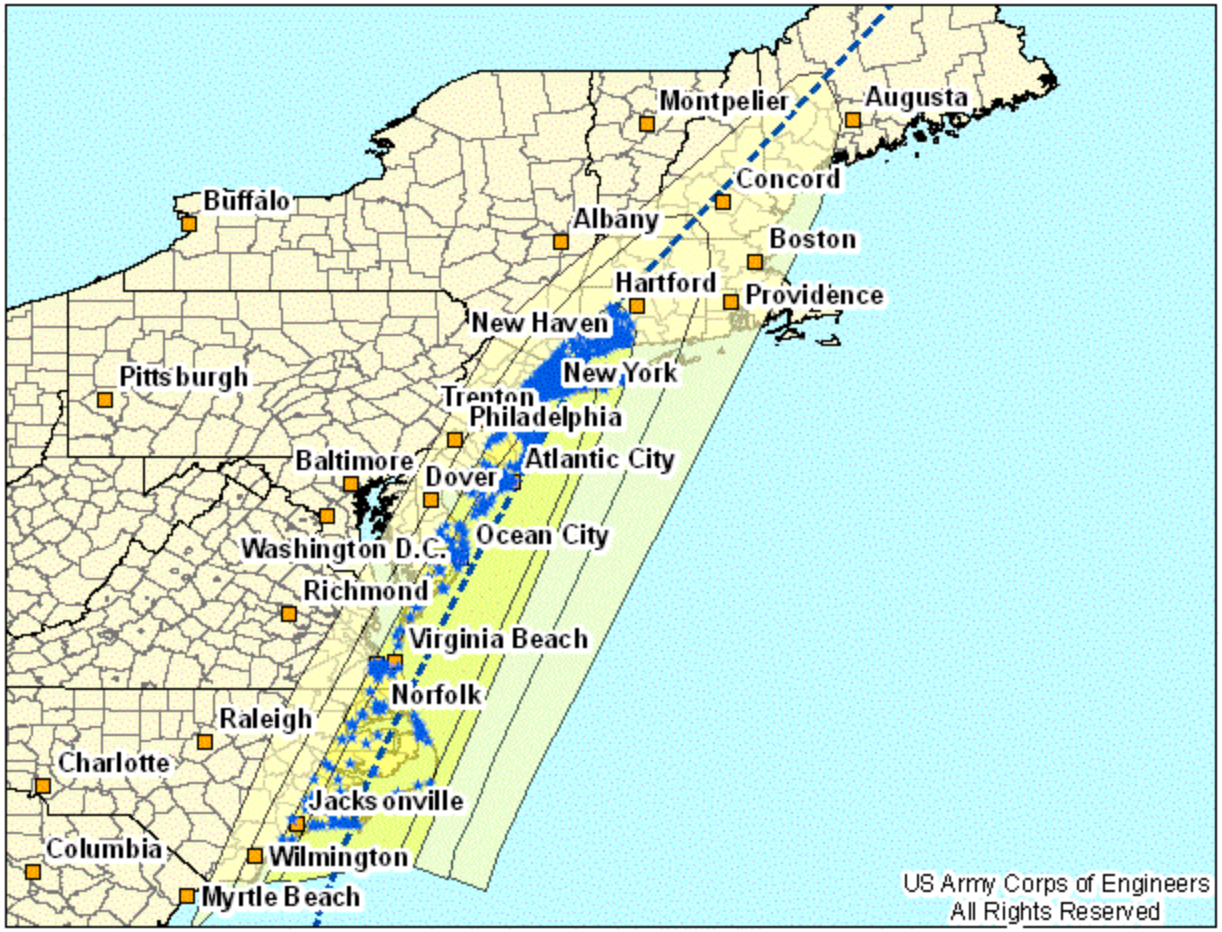
Hurricane Irene Hospitals	
Generated By: Ssiemsen, LRL 1730 EDT 08/26/2011	
Sources: HURREVAC LRL-DEBRIS	Page 22 of 27

US Army Corps of Engineers

Hurricane Irene Law Enforcement

Landfall Expected In About **16** Hours

For Planning Purposes Only!



Most Probable Landfall Law Enforcement Inside Hurricane Force Winds

New York - 361
New Jersey - 218
North Carolina - 82
Connecticut - 80
Virginia - 45
Maryland - 15
Delaware - 15

Model results per County on following page

This model is based on a Category 1 storm making landfall near Outer Banks, NC.

★ Law Enforcement
Forecast Track

Information provided on this page displays a Category 1 storm making landfall near Outer Banks, NC. These projections are based on information from the NHC (1700 EDT 08/26/2011) forecast.

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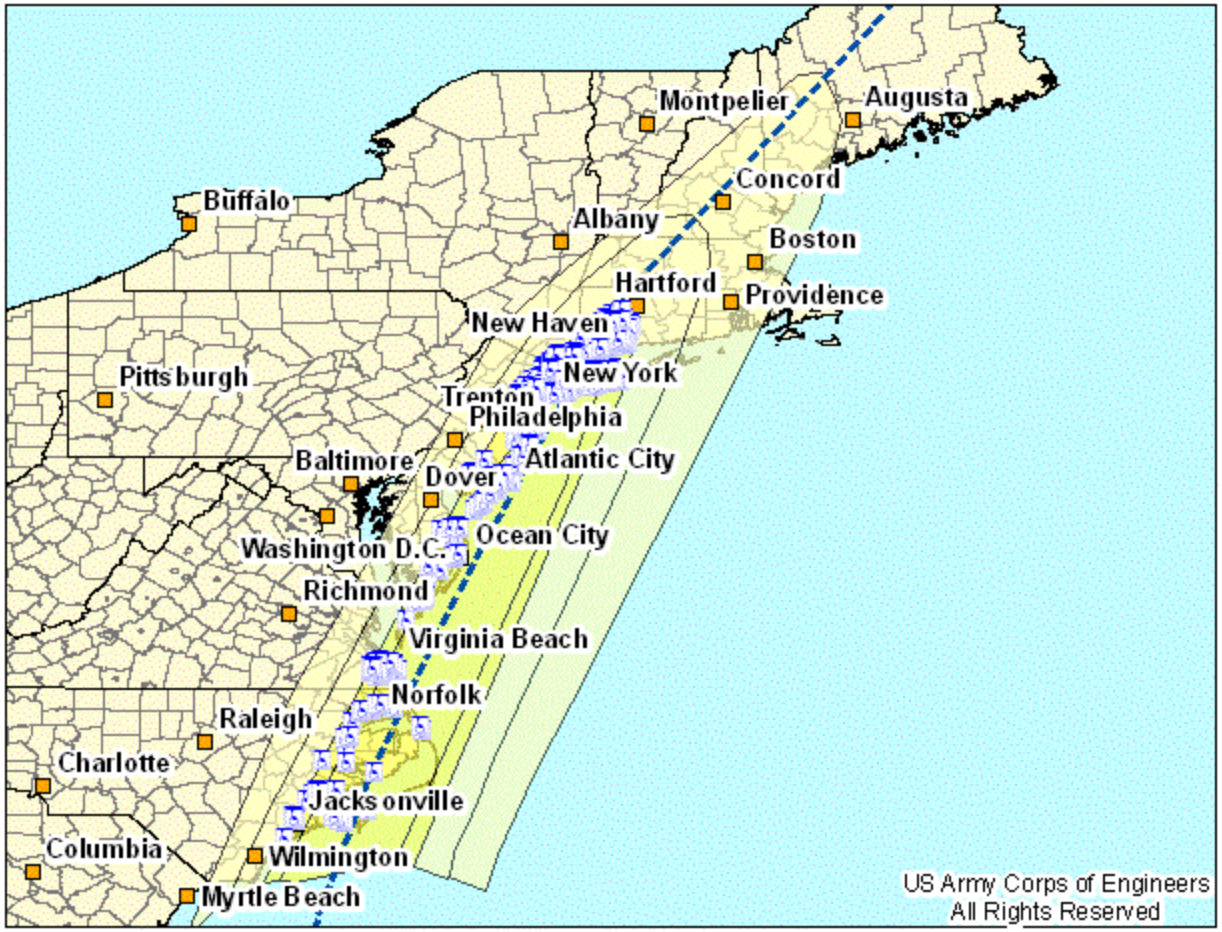
Hurricane Irene Law Enforcement	
Generated By: Ssiemsen, LRL 1730 EDT 08/26/2011	
Sources: HURREVAC LRL-DEBRIS	Page [PN] of [PT]

US Army Corps of Engineers

Hurricane Irene Nursing Homes

Landfall Expected In About **16** Hours

For Planning Purposes Only!



Most Probable Landfall Nursing Homes Inside Hurricane Force Winds

New York - 411
Connecticut - 188
New Jersey - 185
Virginia - 85
North Carolina - 52
Maryland - 10
Delaware - 10

Model results per County on following page

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The number of nursing homes included in this output are those that would be included within estimated hurricane force winds (data source: HSIP Gold 2011).

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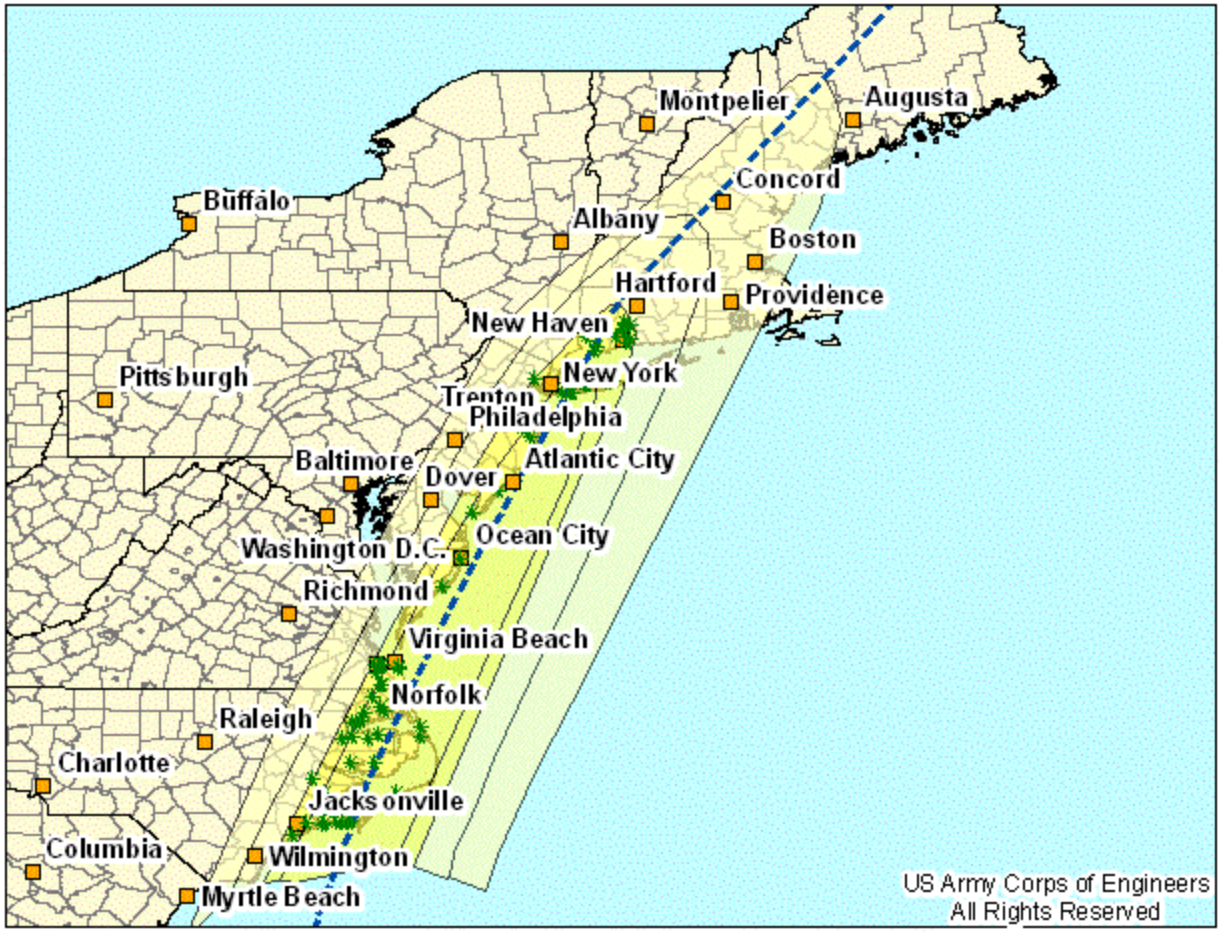
Hurricane Irene Nursing Homes	
Generated By: Ssiemsen, LRL 1730 EDT 08/26/2011	
Sources: HURREVAC LRL-DEBRIS	

US Army Corps of Engineers

Hurricane Irene Potable Water

Landfall Expected In About **16** Hours

For Planning Purposes Only!



Most Probable Landfall Potable Water Inside Hurricane Force Winds

North Carolina - 33
Virginia - 11
New York - 10
Connecticut - 10
New Jersey - 8
Maryland - 1

Model results per County on following page

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The number of potable water included in this output are those that would be included within estimated hurricane force winds (data source: HSIP Gold 2011).

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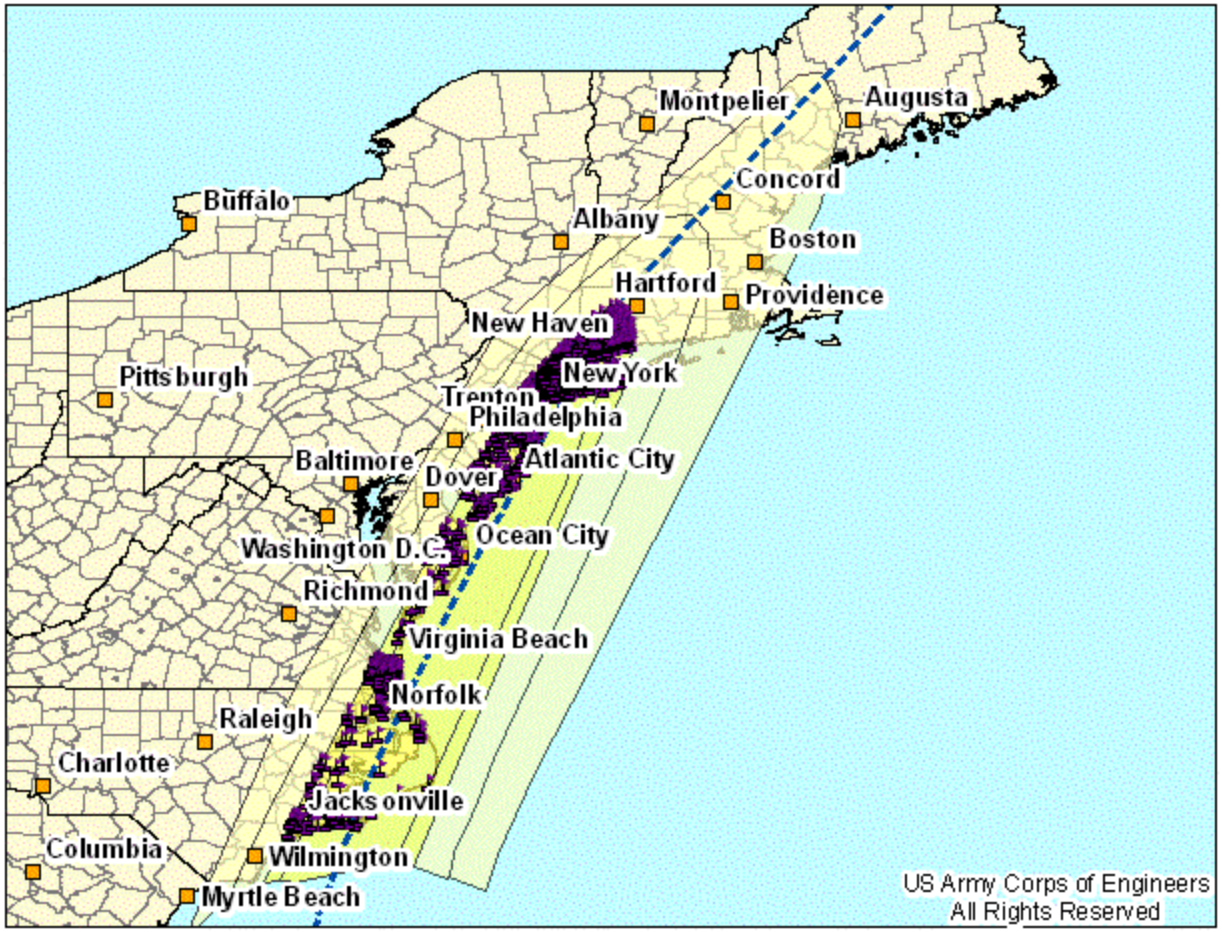
Hurricane Irene Potable Water	
Generated By: Ssiemsen, LRL 1730 EDT 08/26/2011	
Sources: HURREVAC LRL-DEBRIS	

US Army Corps of Engineers

Hurricane Irene Schools

Landfall Expected In About **16** Hours

For Planning Purposes Only!



Most Probable Landfall Schools Inside Hurricane Force Winds

New York - 2,358
New Jersey - 826
Connecticut - 551
Virginia - 252
North Carolina - 148
Delaware - 26
Maryland - 19

Model results per County on following page

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The number of schools included in this output are those that would be included within estimated hurricane force winds (data source: HSIP Gold 2011).

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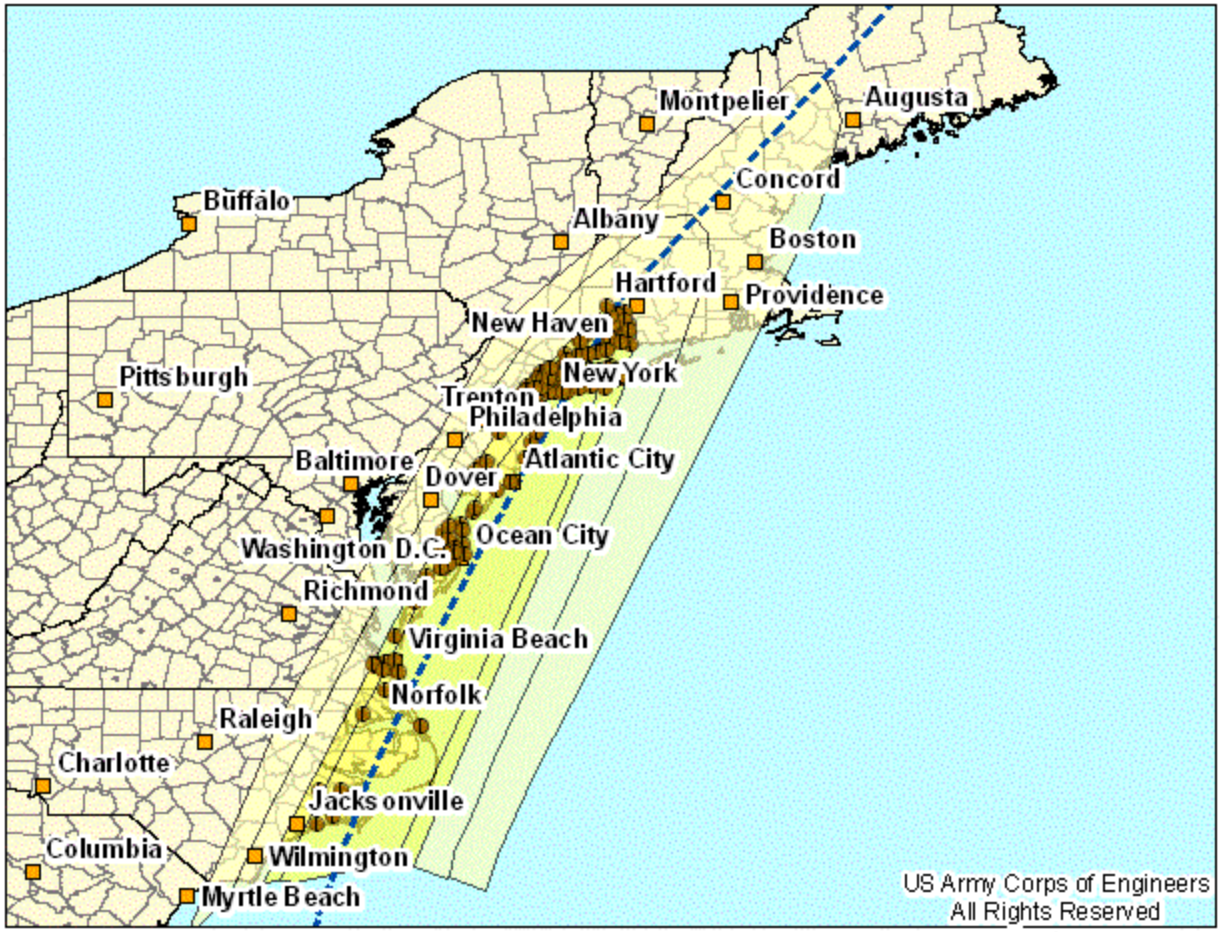
Hurricane Irene Schools	
Generated By: Ssiemsen, LRL 1730 EDT 08/26/2011	
Sources: HURREVAC LRL-DEBRIS	

Hurricane Irene Sewage Treatment Plants

US Army Corps of Engineers

Landfall Expected In About **16** Hours

For Planning Purposes Only!



Most Probable Landfall Sewage Treatment Plants Inside Hurricane Force Winds

New York - 59
New Jersey - 52
Connecticut - 40
Virginia - 10
Maryland - 10
North Carolina - 8
Delaware - 7

Model results per County on following page

This model is based on a Category 1 storm making landfall near Outer Banks, NC.

Sewage Treatment Plants
Forecast Track

Information provided on this page displays a Category 1 storm making landfall near Outer Banks, NC. These projections are based on information from the NHC (1700 EDT 08/26/2011) forecast.

The number of sewage treatment plants included in this output are those that would be included within estimated hurricane force winds (data source: HSIP Gold 2011).

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Hurricane Irene Sewage Treatment Plants	
Generated By: Ssiemsen, LRL 1730 EDT 08/26/2011	
Sources: HURREVAC LRL-DEBRIS	Page 27 of 27